

What is claimed is:

1. An apparatus, comprising:
a flow meter which determines a flow rate of a flow of pressurized fluid;
5 a conduit which receives the pressurized fluid and conducts a first portion thereof to a device under test (DUT);
a bleed orifice which removes a second portion of the pressurized fluid from the conduit at a selected removal rate, wherein the apparatus determines a leak rate for the DUT in relation to the determined flow rate and the
10 selected removal rate.
2. The apparatus of claim 1, further comprising a regulator upstream of the flow meter which regulates the pressure of the pressurized fluid.
- 15 3. The apparatus of claim 2, wherein the regulator utilizes a variable orifice size to reduce flow oscillations in the pressurized fluid.
4. The apparatus of claim 1, further comprising an accumulator upstream of the flow meter, the accumulator comprising a chamber which accumulates a volume
20 of the pressurized fluid.
5. The apparatus of claim 1, further comprising a valve coupled to the conduit and configured to respectively prevent and permit flow of the pressurized fluid to the DUT.
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6. The apparatus of claim 5, wherein the valve is placed at a distal end of the conduit proximate the DUT.

7. The apparatus of claim 5, wherein the selected removal rate for the bleed orifice is determined in relation to a flow rate measured by the flow meter while the valve is configured to prevent flow of the pressurized fluid to the DUT.

5 8. The apparatus of claim 1, wherein the flow meter is configured to determine flow rates over a selected range from a first lower value to a second higher value, wherein a specified leak rate of the DUT is at a level proximate the first lower value, and wherein the selected removal rate of the bleed orifice causes the determined flow rate of the flow meter to be a mid-range value between the first lower value and
10 the second higher value.

9. The apparatus of claim 1, wherein the flow meter is characterized as a first flow meter, wherein the apparatus further comprises a second flow meter coupled to the conduit in parallel to the first flow meter, and wherein the apparatus further
15 determines a leak rate for the DUT in relation to a determined flow rate from the second flow meter and the selected removal rate.

10. The apparatus of claim 1, wherein the controller further compares the determined leak rate for the DUT to a specified acceptable leak rate.
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11. The apparatus of claim 10, wherein the specified acceptable leak rate corresponds to a value equal to or less than 0.5 standard cubic centimeters (sccm) at 1.0 inches of water (inH₂O).

25 12. The apparatus of claim 1, wherein the pressurized fluid comprises air.

13. The apparatus of claim 1, wherein the DUT comprises a housing of a data storage device.
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14. A method, comprising:

determining a flow rate of a flow of pressurized fluid while providing a first portion of the pressurized fluid to a device under test (DUT) and diverting a second portion of the pressurized fluid away from the DUT at a selected removal rate; and determining a leak rate for the DUT in relation to the determined flow rate and the selected removal rate.

15. The method of claim 14, comprising a prior step of measuring the selected removal rate by determining the flow rate of the pressurized fluid while preventing said first portion from reaching the DUT.

16. The method of claim 14, further comprising using a flow meter to obtain the determined flow rate and a bleed orifice to divert the second portion of the pressurized fluid away from the DUT at the selected removal rate.

17. The method of claim 16, wherein the flow meter is configured to determine flow rates over a selected range from a first lower value to a second higher value, wherein a specified leak rate of the DUT is at a level proximate the first lower value, and wherein the selected removal rate of the bleed orifice causes the determined flow rate of the flow meter to be a mid-range value between the first lower value and the second higher value.

18. The method of claim 14, further comprising comparing the determined leak rate for the DUT to a specified acceptable leak rate.

19. The method of claim 18, wherein the specified acceptable leak rate of the comparing step corresponds to a value equal to or less than 0.5 standard cubic centimeters (sccm) at 1.0 inches of water (inH₂O).

20. The method of claim 14, further comprising establishing the flow of pressurized fluid using a regulator.

5 21. The method of claim 14, wherein the regulator of the establishing step utilizes a variable orifice size to reduce flow oscillations in the pressurized fluid.

22. The method of claim 14, wherein the pressurized fluid comprises air.

10 23. The method of claim 14, wherein the DUT comprises a data storage device housing.

24. An apparatus, comprising:

a flow meter which determines a flow rate of a flow of pressurized fluid;

a conduit which receives the pressurized fluid and conducts a first portion thereof to a device under test (DUT);

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a bleed orifice which removes a second portion of the pressurized fluid from the conduit at a selected removal rate, wherein the apparatus determines a leak rate for the DUT by steps for determining the leak rate.